

HELP

ASK OUR TECHNICAL EXPERTS

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London
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HELPFILE

Bit of confusion about Vista

Q Can I run 32-bit software on the 64-bit version of Windows Vista Home Premium? I have a 64-bit computer which, at present, uses 32-bit Windows XP.

Sydney Beauchamp,
sydbeauchamp@blueyonder.co.uk

A The first 64-bit processor used in Windows personal computers was Intel's Itanium, which could not run 32-bit code very efficiently. AMD changed everything by introducing first the Opteron and then the Athlon 64 processors. There were subsequent variants, such as Turion. Apart from their 32-bit only legacy mode, they have a compatibility mode that can be used to run 32-bit and 64-bit software simultaneously. In this mode, each 32-bit application can access up to 4GB of memory space. The 32-bit version of Windows XP had to share 4GB between the operating system and all running applications. Intel followed AMD's lead with its EM64T 64-bit Pentium processors.

All 64-bit versions of Windows can run 32- and 64-bit applications side by side. To run 32-bit applications, they use a software layer called Windows on Windows 64 (WOW64). However, 32-bit applications can call only 32-bit library files, and 64-bit applications (including the operating system) can call only 64-bit library files. Therefore you'll have both 32- and 64-bit versions of many common system DLL files loaded at the same time. What's more, 64-bit code is bigger than 32-bit code. This is because it often takes eight bytes to hold a value that 32-bit code would hold in four bytes. This should not be a problem provided you have plenty of system memory; 2GB is recommended.

Now 32-bit applications will not run faster on a 64-bit version of Windows, and may even run slower because the operating system is using up more of the available memory. Even 64-bit versions of many applications run slower than the corresponding 32-bit applications because of larger amounts of program code. Only applications that need to use large amounts of memory, or that do many 64-bit

mathematical calculations, will benefit. Applications that are expected to benefit from 64-bit operation include CAD, video editing and large databases.

WHICH DRIVER?

The 64-bit versions of Windows can use only 64-bit hardware drivers. Before switching, make sure there are 64-bit drivers for all your hardware, including external devices such as printers and scanners. Lack of driver support was a big problem with Windows XP x64. Users often found their graphics and sound cards did not have 64-bit driver support. This may still be an issue, although far more drivers are available for the 64-bit version of Vista than for XP. The 64-bit version of Vista will not allow the use of unsigned drivers.

Software that adds to Windows components, such as adding right-click features to Windows Explorer, must be 64-bit. This affects programs such as anti-virus software. In general, any software that works with the operating system at a very low level needs to be designed to run on a 64-bit system.

Another issue is that 64-bit versions of Windows cannot run old 16-bit Windows or DOS applications. There are a few of these still around, and all 32-bit versions of Windows run them without any problem. You probably wouldn't know if any of the software you're running is 16-bit. In fact, it was common for 32-bit Windows applications to use a 16-bit installer, so you may have applications that would run fine on 64-bit Windows but which can't be installed.

Other 32-bit applications may fail because they are badly written. On the plus side, these compatibility issues, along with some security improvements, are going to make it harder for spyware and viruses to run on a 64-bit Windows system. Another compatibility issue is that there are lots of badly written applications that run only on 32-bit versions of Windows Vista.

Since 64-bit Windows does not show any significant performance advantage for most applications and will cause compatibility issues for some programs, we would not recommend upgrading until you need to run a 64-bit-only application.

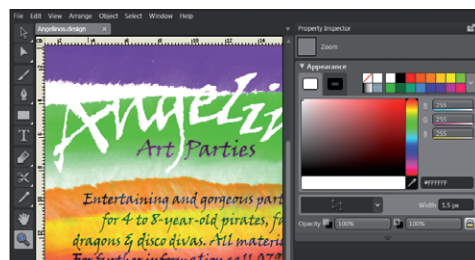
Expression Design needs .NET 3.0

Q I tried to download the beta version of Microsoft Expression Design, recommended in the graphic design feature in *Shopper* May 2007. When the Install Wizard tries to install it, I get a message saying, "You need to have .NET 3.0 run-time components before installing. Try again after correcting the issue." I'm lost.

William Nash, w.nash4@ntlworld.com

A .NET Framework 3.0 is the latest version of Microsoft's programming toolkit. Programs written using this system require you to have the corresponding run-time components installed on your computer. This application requires it. While .NET Framework 3.0 was designed for use with

Windows Vista, you can also run it on Windows XP provided you have Service Pack 2 installed. Download it from <http://tinyurl.com/yflefq7>.



▲ Expression Design requires .NET Framework 3.0

How long does a notebook battery last?

Q My Packard Bell Easynote L4014 notebook, which I've had for a year, has a problem with the battery. It used to last two hours, but now it only lasts just over half an hour. Is the battery coming to the end of its life and, if so, how much does Packard Bell quote for a new battery? If the price is £140, for example, why that much? And where else can I buy a cheap battery that will last at least four hours?

Daniel Johnson,
johnson.dantheman@gmail.com

A All rechargeable batteries have a limited life. The cells used in nickel metal hydride (NiMH) batteries, which are what you have, are rated by the manufacturers as being good for about 300 full charges. After that amount of use, the capacity steadily reduces until soon the battery won't hold a charge at all. So, if you regularly use your notebook running with battery power, you might have reached the end of the battery's life in less than a year.

Short battery life seems to be a design problem with your specific notebook model. You're lucky if you got two hours out of it when the battery was new. The battery charge time is very short when running this computer. There is also something about the design of the system that causes the battery to run down by about 15 per cent each day, even when the computer is switched off. The battery does not run down if you remove it from the computer when not in use.

There is another possibility. If you frequently plug the charger in when the battery is only partially discharged, a nickel metal hydride battery can suffer from the formation of crystals on its plate, which prevents it holding a full charge. This 'memory effect' is not as pronounced as with the older NiCad batteries, but nickel metal hydride batteries can still feel the effects. If this is the case, you may be able to retrain the battery by running the computer on batteries until it turns off and then fully recharging it several times.

As for the cost of replacement batteries, companies charge a lot possibly because they know you'll find it



▲ If you are feeling brave, you could open up your battery pack and replace the cells yourself

hard to find a battery elsewhere to fit your computer. We didn't find any company that makes replacement batteries for your model of computer. In the USA, there are plenty of companies that will replace the cells in a nickel metal hydride battery, but we do not know of any UK firms that do this. Larger capacity (but more expensive) lithium-ion batteries are common in most notebooks, but you won't be able to use one of these unless your computer was designed for it.

If you're feeling adventurous, you could open up the battery pack and replace the cells yourself. Inside the plastic case are several cylindrical rechargeable cells soldered together. See <http://tinyurl.com/2ad2wy> for an example of the procedures involved. However, readers should try this only with nickel metal hydride battery cells. Trying to do so with lithium battery cells is more likely to cause a fire, plus the charging circuits are more complex.

Finally, you could consider an external battery that is designed to fit most notebooks. These are usually flat, about the size of a notebook computer, and plug into the power adaptor connector. They usually give much longer life, but mean you have to carry around more weight. Check for compatibility with your computer before buying. For more information on battery technology, see www.batteryuniversity.com.

Your experts

HELPFILE

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Paul Mullen

With 27 years of PC experience as a power user, programmer and IT consultant, Paul Mullen answers all PC problems, tackling hardware, system and security issues.



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SOFTWARE HELP

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Database developer and productivity expert Kay Ewbank offers help with office applications.



Ben Pitt

Professional musician and keen photographer Ben Pitt gives advice on using creative software.



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BUYING HELP

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Labs Editor Tom Royal recommends the best products for your specific requirements.



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BUSINESS HELP

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Simon Edwards

Web developer and security expert Simon Edwards provides IT solutions to your business goals.



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Feedback Spam filters

✉ In response to John Harbridge's request for advice on an ISP offering dial-up and good anti-spam services (*Helpfile*, *Shopper* June 2007), you claimed that free filtering offered by ISPs is 50 per cent effective at best. I beg to differ. My dial-up ISP (BT Yahoo!) provides a fantastic spam-filtering service. It is over 97 per cent effective against the torrent of spam I receive, which can add up to 1,000 messages per week.

The spam is deposited in a bulk folder. I used to check this in case genuine mail had been diverted there erroneously. But the system is so reliable, I no longer find a check necessary and normally just dump the contents.

Michael Wood, via email

A Web-based email services, serving many thousands of users, find it easier to identify spam by looking at patterns of incoming email. That is why we like Google's mail service. BT has now subcontracted its email service to Yahoo!. As far as we know, BT's Yahoo! service uses the same spam

filtering as the free Yahoo! Mail service. According to BT's website (<http://tinyurl.com/2bfb4h>), it has the same restrictions. You pay £1.50 per month to download your mail to Outlook using POP3, or to expand your mailbox capacity from the standard 100MB to 2GB. Some BT accounts include these premium features as standard, but so do Google's email accounts and they are free.

There is no doubt that Yahoo!'s spam filtering has greatly improved, and some users report that it is 97 to 99 per cent effective for them. But different users report different experiences. For example, anti-spam expert Terry Zink (<http://blogs.msdn.com/tzink>) reports it as being only around 85 per cent effective. Like many other services, you have to train it by reporting spam and also reporting false positives. This can be done only if you use the webmail interface. If you have a pay-as-you-go account, webmail will cost you 1p a minute to access.

We still think if you are going to use a webmail program, you're far better off with the free Google Mail, which offers more accurate spam filtering.

Please contact the relevant department at the email address listed above. You can also write to us at:

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Please try to give full details of your problem. We need an email address or daytime and evening telephone numbers in case we need more information.

Although the policy of *Computer Shopper* is not to publish readers' email addresses, we include them in Help so that other readers with experience of similar problems can share their solution (please also cc any comments to the relevant Help department above). If you would prefer not to have your email address published, please say so. ➔

Baffling write error message

Q I frequently get this error message: "Windows Delayed Write Failed: Windows was unable to save data for file C:\Documents and Settings... The data has been lost. This error may be caused by a failure of computer hardware."

As far as I can make out, all my hardware is working correctly. Can you help me solve this problem? I am running Windows XP Home Edition with Service Pack 2 installed.

Paul McCandlish, airacomet@ntlworld.com

A You can ignore the word 'delayed'. The vital part of this message is that Windows was unable to write to your hard disk. For performance purposes, Windows normally caches disk write operations, delaying writing data to the disk so as to minimise the movement of the drive's head. The caching software is very reliable and rarely causes errors, so your problem suggests that Windows is unable to write to your hard disk at times. You need to tackle this, as it is likely to cause data corruption at some stage. That could make all the files on your hard disk inaccessible.

DISABLING CACHING

You can try turning off write caching to see if the problem is related to hardware or the software cache, but this will reduce disk performance. By default, write caching is enabled for all fixed hard disks and disabled for removable devices, such as external USB drives or flash cards.

To check and change the settings, right-click on My Computer, choose Properties, then click the Hardware tab and select Device Manager. Click on the '+' sign by Disk Drives to see individual drives and click on a drive to show its Properties. On the Policies tab, you'll see an option to enable or disable write caching.

HARDWARE PROBLEMS

We strongly recommend making a complete backup of the drive before testing further. Running tests can often cause a failing drive to break completely.

There are several possible hardware-related causes of this error message. You may have a failing hard disk, either with some bad sectors

or one that occasionally locks up and fails to respond to commands. Some computers have a BIOS setup option to report the SMART diagnostic status of hard disks on bootup. If you enable this it may reveal the error, although half the time it does not.

To look deeper into the problem, run the drive manufacturer's diagnostic tools, or the free MHDD program from <http://hddguru.com>. It is common for writers of diagnostic programs to miss problems resulting from intermittent lock-ups and their software may report a drive as being OK when it is failing. MHDD has a random seek test that can often reveal this problem and its sequential read test will show if some reads are taking an unusually long time.

If you have an older computer, the BIOS settings may be trying to use a UDMA data transfer mode your hard disk does not support. We have seen cases where a drive is configured to use UDMA (also known as ATA-66) but only has a 40-wire cable. UDMA transfers require an 80-wire cable, which usually comes with one plug coloured blue. The coloured connector must be plugged in at the motherboard end. It is also possible for a damaged IDE cable to cause this error. Sometimes systems have an IDE cable that is too long. The specifications limit IDE cables to 18in, but some systems come with 24in cables that may cause intermittent problems. Faulty termination of SCSI drives can also cause the error.

If you have a SCSI or RAID hard disk that needs special drivers for Windows XP, try updating the device drivers. Some problems have been reported using Windows XP Service Pack 2 with certain older drivers. Even with standard IDE drives larger than 128MB, which normally use a standard Microsoft driver, you may find that a firmware update or special driver from the drive manufacturer can cure the problem.

If the problem occurs only when you are using an external USB or FireWire drive, the issue may be with the USB controller, perhaps due to resource conflicts with other PCI cards. If you are using a USB2 or FireWire PCI card, try placing the card in a different slot or update its drivers. If the drive is attached to a FireWire or USB port on the motherboard, try removing other PCI cards in the system. LaCie, which makes external



▲ An 80-wire cable (left) allows UDMA transfers; a 40-wire cable (right) won't

FireWire drives, suggests using a FireWire card that is based on the Texas Instruments chipset.

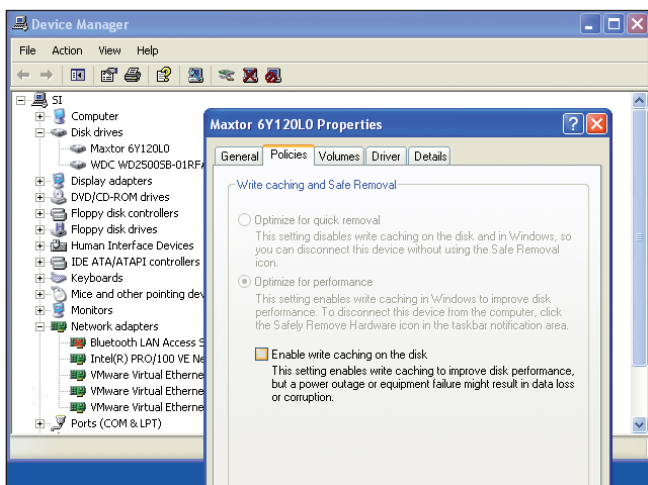
MEMORY PROBLEMS

Although hardware problems are by far the most common cause of this error, an error may occur in the Windows write caching system under certain specific circumstances. If you have a lot of memory (at least 768MB, or more typically 1GB), one or more large hard disks over 100GB and an AGP graphics card set to use a very large AGP aperture size, and you then tell Windows to maintain a large system cache size, it is possible for Windows to run out of Page table entries. This will cause the error.

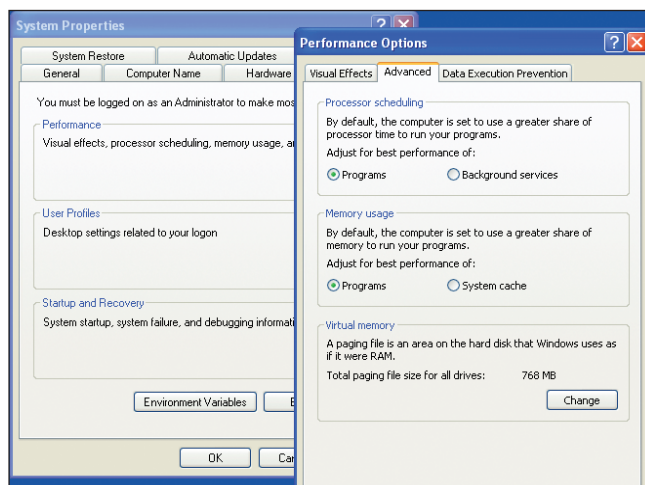
To avoid this situation, right-click My Computer, click Properties and then select the Advanced tab. Under Performance, click Settings and then click the Advanced tab. If Memory usage is set to System cache, change it back to Programs, which is normally the default option. This should cure the problem.

FURTHER RESEARCH

Some Windows XP tweaking guides incorrectly misinterpret the use of the LargeSystemCache setting in the Registry, suggesting that it is needed to maximise Windows XP's performance. The opposite is likely to be true. In the area of the Registry called HKEY_Local_Machine\System\CurrentControlSet\Control\Session Manager\Memory Management, the LargeSystemCache setting should be set to zero. The LargeSystemCache setting is intended for use on Windows 2000 and 2003 Server products. For a full discussion of the purpose of this setting, see <http://tinyurl.com/23hvlz>.



▲ Turn off write caching to see if the problem is related to the software cache. On the Policies tab, you'll see an option to enable or disable write caching



▲ An error may occur in the Windows write caching system. On the Advanced tab, change Memory usage so it is set to Programs rather than System cache

Hard disk and Windows setup problems

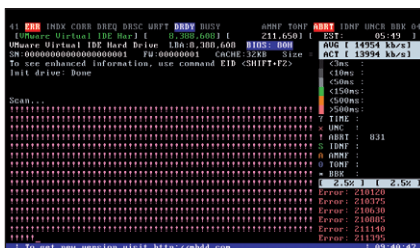
Q I recently built a new computer but got stuck in a loop when installing the Windows XP operating system. This was because the PC tended to hang when the motherboard's BIOS was being set. Subsequently, I ended up with two Windows XP systems at bootup, but only one was active. As I gradually added the chipset drivers and other features, Windows developed loading problems, and the blue progress meter that moves across the loading screen took longer and longer before the system launched. Eventually, it hung completely.

To boot Windows I had to start in Safe Mode and select the last good configuration or recover to an earlier date. I have liaised continuously with the motherboard manufacturer, trying all its suggestions to resolve the system hanging problem. Eventually it suggested that I replace the motherboard, which I did, but the problem persisted. At the suggestion of Scan Computers, I changed the motherboard supplier, but while the BIOS was stable I still had problems loading Windows XP as before.

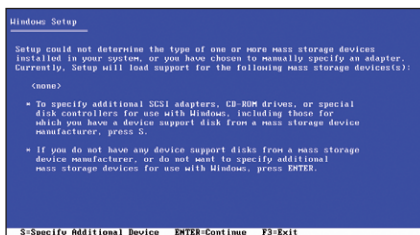
I'd bought another SATA II hard disk with the intention of setting up RAID, which the new motherboard supports, so I removed the first hard disk, fitted the new hard disk and loaded Windows XP to it. The system now operates normally. It looks like my first disk is damaged or infected. Can I refit the original disk in a RAID array and delete the two operating systems on it, as well as all the other files on the old hard disk? Is this possible without affecting the operating system and new chipset drivers on the new hard disk?

Malcolm Duncan,
malcolmduncan@gmail.com

A Problems with a clean installation of Windows XP are usually hardware related. If you have problems installing Windows, you are probably going to have other, much harder-to-diagnose problems when running Windows. Your memory, motherboard, power supply, CD drive or hard



▲ MHDD's seek test will often find errors that the more common sequential disk tests miss



▲ Press S in order to specify your non-standard hardware

disks can all cause problems. We always look at the possible causes in that order.

The hard disk is not likely to be the cause of the problems but, if you still had problems performing a clean install of Windows with a new motherboard, it is a possibility. Fortunately, most hard disk manufacturers have diagnostic utilities that you can download from their websites to help find out what's wrong. See the note below for a list of these.

FULL ATTENTION

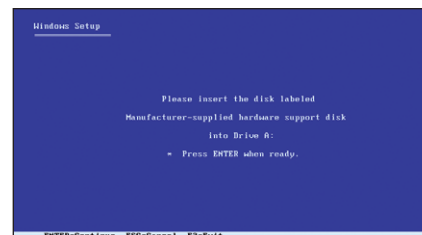
In all cases, you need to run the full test. So-called 'quick' tests often miss all but the most obvious failing drives. Even the full tests may miss some problems. When errors are found, the utility will often offer to repair them. This works when the reported bad sectors are just soft errors that have been caused when data got corrupted as it was being written to disk. In your case, these could have arisen from the defective motherboard.

The utilities may also 'map out' bad sectors, replacing them with spare sectors so the errors are not visible. When a drive is new, this is done at the factory, dealing with any manufacturing imperfections in the disk surface. After that point, doing this is not such a good idea. New problems may be the result of a head crash, which scratches the disk surface and releases debris. If the heads then collide with this debris, more head crashes will result. So mapping out bad sectors may just conceal the damage and often more errors appear quickly.

Even a drive that passes the manufacturer's diagnostics can, in some circumstances, have problems. Some drives may suffer from intermittent lock-up problems that, although recorded by the SMART diagnostics system in recent drives, may not be picked up by certain diagnostic programs. As a further check, you could run MHDD, a free diagnostic program from www.hddguru.com. Its seek test will often find errors that a sequential test (the kind most diagnostics rely on) may miss.



▲ During the Windows repair installation process, press F6 to install a third-party SCSI or RAID driver



▲ Windows setup can only load drivers at this stage from drive A:

ARRAY OF TROUBLES

It is a tricky job to convert your Windows installation, which has been installed on a single drive, into a new RAID array. Your RAID utility will probably allow you to set up a mirrored array, copying the contents of the existing drive. When you select create RAID 1 (Mirrored), it should offer a choice of 'Create Only' or 'Create and Duplicate'. The second option is the one you want. Make sure the drive with the data on it is the first drive you specified, or the utility will copy the blank disk over the one holding Windows. It is very easy to make errors in this process, and if you get it wrong there is almost no chance of recovery, so we strongly advise a backup of any important data.

Once you have transferred Windows to the RAID array, it will not boot from the RAID array unless it already has the correct driver for the RAID controller. You have a Catch-22 situation. Until you attach drives to the RAID controller, it will not load its BIOS. This means Windows will not load RAID drivers when it boots from the non-RAID controller. Once you attach it to the RAID controller, Windows can't boot because it does not have the right driver software.

The simplest and cleanest solution is to set up your RAID array using two empty drives and install Windows again. However, if you have data on the disk, or have loaded applications you want to preserve, it is possible to create the RAID array by copying the contents of the existing drive, and then attempt a repair installation of Windows. During this process, you're prompted to press F6 if you need to load a third-party SCSI or RAID driver. Watch for this prompt and have a floppy disk with the correct driver handy.

Incredibly, even though many new computers don't have floppy drives, it seems Windows setup can only load drivers at this stage from drive A. If you don't have a floppy drive, and your version of Windows does not already include a driver for your RAID controller, you need to create a custom version of the Windows CD with the driver you need. See <http://tinyurl.com/4wkz> for details. Some motherboards also allow you to use a USB flash drive as drive A.

WHERE TO DOWNLOAD HARD DISK DIAGNOSTIC UTILITIES

Fujitsu
www.fujitsu.com/us/services/computing/storage/hdd/support/utilities.html

Hitachi (and IBM): Drive Fitness Test
www.hitachigst.com/hdd/support/download.htm

Samsung: Hutil or Shdiag
<http://samsung.com/Products/HardDiskDrive/utilities/shdiag.htm>

Seagate: SeaTools
www.seagate.com/www/en-us/support/downloads/seatools

Western Digital: Data Lifeguard
<http://support.wdc.com/download>

Maxtor and Quantum use Seagate SeaTools, above

There is no utility provided by Toshiba, but you can use Hitachi's DFT or MHDD to see if the drive is error free

Steganos 2007 installation problem

Q I purchased an update to Steganos AntiVirus 2007, but I can't install it. On trying, I get a message that the 2007en.msi file was damaged and cannot be installed. When I installed Steganos AntiVirus 2006 last year it was very easy, but trying to update it is a nightmare. I have uninstalled this older version as instructed, though I don't know why this should be necessary. I am a total novice on a computer and I am struggling with this.

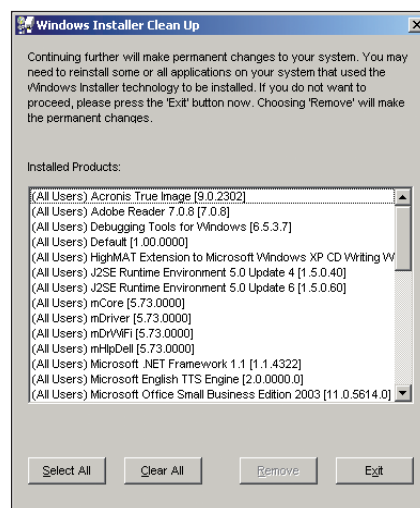
*Diana Bowden,
dianabowden@btinternet.com*

A It is quite normal to have to uninstall old versions of anti-virus software before you can install new ones. You wouldn't want two anti-virus programs running at the same time, and the program does not allow automatic removal because it is common for viruses to attempt to remove or modify

anti-virus software. Therefore, anti-virus software often takes precautions to prevent other programs changing its installation.

We have seen error messages suggesting a corrupted installer file with other programs. If you download the new version again and still get messages that claim the file is corrupted, the problem is probably not the file you downloaded, but rather that the Windows Installer database has become corrupted. A common error message is: "Error 1316. A network error occurred while attempting to read from the file."

To fix this, download the Windows Installer Clean Up tool (msicuu2.exe) from <http://tinyurl.com/42ul9>. When it finishes downloading, run it and it will install the actual tool. Click on Start, All Programs, Windows Installer Clean Up Tool. This should display a list of currently installed programs. Select those you are having trouble with and click Remove. Hopefully the Steganos AntiVirus program should then install correctly.



▲ Remove troublesome programs from the list of installed programs in Windows Installer Clean Up

Application error with Media Center

Q I have a new PC with Windows XP Media Center software. When closing Sonic after using it for the first time, an application error occurred that read: "Media Hub.Exe – application error. The instruction at 0x0036ae10 referenced memory at 0x0025f5d0. The memory could not be written. Click OK to terminate the program."

When I click on OK, the same message appears with different numbers, and when I click again a further message with more

different numbers appears. In total, three different error messages appear before it clears from the screen. These same messages come up every time I exit Sonic. Can you advise how to stop this happening all the time?

Alan Bottell, via email

A We're guessing you have a Dell PC, as this error occurs most commonly with the version of Sonic provided by Dell. It seems this software is incompatible with

Windows Media Player 11. More details can be found at <http://tinyurl.com/27ntz9>.

There is a patch, but it is available only for Dell customers. For non-Dell versions of Sonic, Roxio suggests first trying to reregister msxml3.dll. Click on Start, then Run, type in regsvr32 msxml3.dll and click OK. Hopefully you'll see the message "DllRegisterServer in msxml3.dll succeeded". Then restart and see if it cures the problem. If it doesn't, Roxio suggests removing Media Player 11 and reinstalling Media Player 10.

Vista problems on my Acer Aspire

Q In February, I bought an Acer Aspire 5611AWLMi computer with Windows XP on it. It came with a voucher to upgrade to Windows Vista. Everything worked fine until the computer was upgraded to Vista, and I have been told by Acer that it is not possible to go back to Windows XP.

I installed a SpeedTouch 330 modem, Sosen camera, ArcSoft Photo Studio, Hauppauge TV tuner, HP printer/scanner and satellite TV via internet. None of these now works, so I have a load of useless junk sitting on my desk. Some of the programs I don't use do work but, aside from these, the operating system could be described, in the words of the Sales of Goods Act, as 'not fit for purpose'. Any suggestions on how to get a working computer would be appreciated.

*Raymond Lower,
raymenl2000@btinternet.com*

A To run Vista, you need new device drivers for all your hardware. We recommend that you equip the notebook with at least 1GB of RAM, some of which will be used for video memory.

Applications will mostly run in compatibility mode once you have sorted out your hardware device drivers. The difficulty is that many devices just a year or two old have not got any Windows Vista drivers available, although many manufacturers are now starting to release them.

The Thomson SpeedTouch 330 modem was a common source of Vista problems until recently, but now drivers are available for Vista and Vista x64. See www.speedtouch.co.uk/330.asp. ArcSoft has an important Vista compatibility patch at www.arcsoft.com/support/downloads. This solves a problem with ArcSoft applications blocking use of the CD/DVD drive. There are free Vista-compatible updates for certain ArcSoft applications, but older applications are not officially supported. Vista support for your Hauppauge TV tuner requires a driver update. Find out which Hauppauge products have Vista updates at www.hauppauge.com/pages/support/vista.html. HP is gradually producing Vista-compatible drivers for current and recent printers, but may not support printers made more than two years ago. For compatibility information, see <http://tinyurl.com/3ycbsp>.

Acer's instructions for the Vista upgrade tell you to download two packages from its website,

which you need in addition to the Vista upgrade CD. The first contains the BIOS and driver updates needed for your system to run Vista properly. The second includes updates needed for Acer applications. You need both these packages in addition to the Vista DVD. The Acer upgrade wizard should then update your drivers and Acer-supplied applications automatically.

Acer gives users the option to install Windows Vista alongside Windows XP, creating a dual-boot installation. This would be our preferred choice, provided you have enough disk space.

If you followed Acer's recommendations and backed up your system to a CD or DVD with Acer's eRecovery Management tool before the upgrade, you will be able to use that CD to roll back to Windows XP. Unfortunately, eRecovery won't run under Vista and also demands a FAT32 partition, so you can use it only if you created a bootable CD or DVD. In addition, the Vista upgrade will have created a backup of your old Windows, but restoring it can be complicated and needs a lot of technical expertise. See the instructions at <http://support.microsoft.com/kb/933168>. Acer's System Recovery CD should let you return to Windows XP, but all user data and settings will be lost.

Why can't Intel's 915GM run Aero?

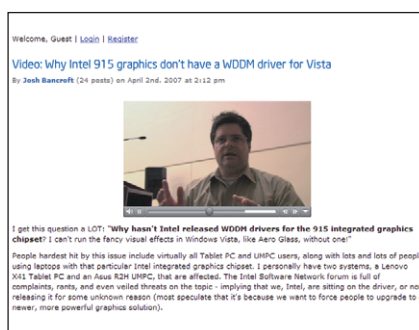
Q In *Helpfile*, *Shopper* June 2007, you said that the reason Intel produces WDDM drivers for the 945 chipset to enable Aero Glass, but not for the 915GM chipset, is because of the hardware limitations and because it would be difficult to write a driver. Could you please explain what limitations there are with the 915GM chipset, apart from that it uses shared memory?

Daniel Johnson,
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A The lack of Windows Vista support for the 915 chipset is causing a lot of anger among owners of fairly new computers, which were equipped with this chipset rather than the later 945GM. You'll find the official Intel explanation at www.intel.com/support/graphics/sb/cs-023606.htm#5. Basically, Intel says the chipset wasn't designed with Windows Vista in mind and that hardware limitations make it impossible to meet the performance requirements of a Vista driver.

Oddly, the chipset was supported by earlier beta versions of Vista. It may be that the hardware limitations, and in particular the lack of a feature called Hardware Scheduler, makes it too slow. An Intel developer has posted a video explanation by Senior Development

Engineer Chuck DeSylva at <http://softwareblogs.intel.com/2007/04/02/video-why-intel-915-graphics-dont-have-a-wddm-driver-for-vista>. This video requires QuickTime to play it. Several complainants have pointed to the description of this chipset at www.intel.com/products/chipsets/915gm, which says the chipset "meets all current requirements for the Microsoft Windows Vista Capable PC program". Unfortunately, although Microsoft confusingly defined 'Vista Capable' as meaning it can run the Basic version of Vista, the sticker does not mean that it can run Aero. For that, a computer has to be described as 'Vista Premium Ready'.



▲ Intel has had to contend with a lot of anger over its lack of Vista support for the 915 chipset

Help me fix my broken LCD screen

Q I have a Packard Bell Easynote L4014 laptop, bought from PC World in early 2006. There appears to be a problem with the LCD panel. When I open the lid, there is a crack in the middle of the screen, which gradually gets larger every time I open or close the lid. Its warranty has expired.

I remember that in a previous *Helpfile* article someone had an HP laptop with a screen problem and they said that HP quoted just over £300 for the repair. When I contacted Packard Bell for help, it seemed to accept credit cards only for payment and we only have a debit card. Is there anywhere else I can get this problem sorted, and that accepts payment by debit card? And how much will it typically cost?

D Johnson,
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A Unfortunately, cracked LCD panels and other accidental damage are rarely covered by a warranty, even if the system was still covered. An exception is Dell's Complete Care program, which explicitly covers accidental damage. However, unlike many other notebook components, the LCD panels are standard parts that can be replaced easily. If you feel confident in your technical skills, you can change the panel yourself. The hardest part of the job is opening the plastic bevel that surrounds the screen. Alternatively, you could take it to a local computer repair store.

Sometimes you can find a complete working screen for your notebook computer on eBay. It is generally easier to replace the complete screen rather than try to take the plastic bits apart. You should try searching for Packard Bell L4 series. However, these were not very popular, and it is more likely that you will have to determine the exact make and model of LCD panel used and then order one of those.

To discover this, you are going to have to open the plastic around the screen and then read the labels on the back of the panel. These casings vary but generally there are screws, often concealed under rubber or plastic caps, and there are plastic clips that hold the two parts together. Once you have it all apart, then you have to figure out what the model number is. Usually it is easy to determine the manufacturer's name, but there are often several sets of numbers on the back of the panel. If in doubt, use Google to search for each of them, and it should be obvious which one is the model number.

Once you know which panel you need, then you can either try eBay or search for suppliers. Just to give you an idea, a 15in ultrabright LCD panel like yours can cost anywhere from £50 to £200, depending on the rarity of that particular model and where you buy it. ☹

Can I upgrade Dell Dimension?

Q I bought a Dell Dimension 3100 last year, with a mind to upgrade when funds allowed. I've fitted an LG multi-format drive, wireless card and 2GB of RAM. I hoped to add a Radeon X1950 card for video-editing and gaming purposes. But when I opened the case to fit the RAM, I found the power supply is underrated and the motherboard has no graphics card slot. I'm embarrassed at my short-sightedness. I've gathered some information with Google but, other than pointing out the errors of buying a Dell low-end system for upgrading, it's not helpful. Can you suggest a suitable PSU and motherboard, or another solution?

Richie Dix,
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A The very basic and inexpensive Dell Dimension computers, including models labelled 2400, 3000, and 3100 (renamed E310), are intended for basic home internet or small office use and are not designed for expansion. They should be fine for answering email, surfing the web or tasks such as word processing. Unlike the mid-range series, which has model numbers starting with a 4 or 5, these PCs won't let you add a



▲ Dell Dimension PCs are not really designed for expansion

graphics card so they are going to be very limited in their game-playing ability. They also don't have much room for extra hard disks inside the case, so the 230W power supply Dell uses is perfectly adequate. Since Dell rates its power supplies very conservatively, this supply is more powerful than many cheap power supplies that claim to be rated for 450W. It's more powerful than the power supplies found in comparable systems from HP or Gateway.

We would not recommend upgrading the motherboard. Microsoft licenses the OEM copy of Windows that is supplied with computer systems for use only with the computer it was originally supplied with, and it defines a new motherboard as making it a different computer. The only exception is that it allows a

replacement motherboard if the original failed and an exact replacement is not available. Dell supplies BIOS-locked versions of Windows that recognise a signature in the BIOS of a Dell motherboard. When you install a new motherboard, your copy of Windows refuses to run until you call a Microsoft Activation hotline and explain why you are trying to run a Dell copy of Windows on a non-Dell motherboard.

Sadly, your best option is to sell this system and get a more upgradeable one.